CLAIMS

WHAT IS CLAIMED IS:

1. A method of analyzing contents of purified dense core vesicles (DCVs), and which method comprises determining the contents of DCVs from extracted brain samples wherein the DCVs are purified at least 50-fold.

2. The method of claim 1, wherein the brain sample is rabbit optic nerve.

3. The method of claim 1, wherein the analysis is done by immunoassay.

4. The method of claim 1, wherein the analysis is done by Western blot.

5. The method of claim 1, wherein the analysis is done by chromatography.

6. The method of claim 1, wherein the analysis is done by mass spectroscopy.

7. The method of claim 1, wherein the analysis is done by immunoadsorbtion.

8. A method of purifying dense core vesicles, which method comprises

(a) centrifugating a resuspended pellet after homogenization of nerve and termini from dissected brain samples in order to obtain a microsome preparation;

(b) separating microsome preparation by a sucrose velocity size gradient;

(c) cetrifugating the microsome preparation onto a sucrose pad to yield a purified product; and

(d) collecting a quantity of the purified product from an equilibrium density gradient.

9. The method of claim 8, wherein the initial centrifugation of step (a) is low speed, followed by 100,000xg for 2 hours.

10. The method of claim 8, step (c) wherein the final quantity of the product is separated by density through centrifugation of 92,000xg for 18 hours.

11. The method of claim 8, wherein dense core vesicles were collected on the sucrose velocity size gradient at gradient levels between 29-42%.

12. The method of claim 8, wherein dense core vesicle were collected on the sucrose equilibrium density gradient at gradient levels between 38.5-45.5%.

13. A composition comprising purified dense core vesicles having nerve peptide or neurotransmitter.

14. A composition of claim 13, wherein the composition contains Substance P.

15. A composition of claim 13, wherein the purification is greater than 1,750-fold.